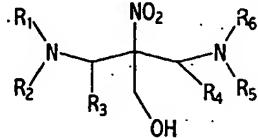
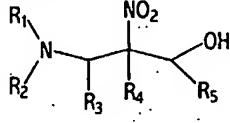


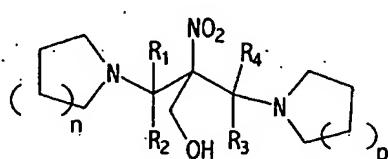
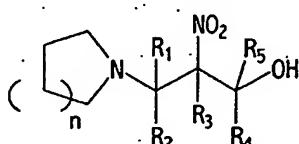
WHAT IS CLAIMED IS:

1. A cured phenolic resin comprising:
 - a. a phenolic compound;
 - b. an aldehyde; and
 - c. a curing agent selected from the group consisting of oxazolidines, nitroamines, aminonitroalcohols, imines; hexahydropyrimidines, nitroalcohols, nitrones, hydroxylamines, nitro-olefins and nitroacetals.
5. The cured phenolic resin of Claim 1, wherein the phenolic compound is selected from the group consisting of phenol, resorcinol, bisphenol, phloroglucinol, cresols, alkyl phenols, phenol ethers, tannins and lignins
10. The cured phenolic resin of Claim 1, wherein the aldehyde is selected from the group consisting of formaldehyde, acetaldehyde, propionaldehyde, cyclohexanedicarboxaldehydes, benzaldehydes, furfural, an aryl aldehyde and a heterocyclic aldehyde.
15. A phenolic resin curing agent selected from the group consisting of oxazolidines, nitroalcohols, nitroamines, aminonitroalcohols, imines, hexahydropyrimidines, nitrones, hydroxylamines, nitro-olefins, nitroacetals and combinations thereof.
20. A curing agent composition comprising a nitroaminoalcohol having the following structures:



wherein R_1 to R_6 may be the same or different, selected from H, C₁ - C₁₂ linear or branched alkyl or alkenyl, phenyl, substituted aryl, heterocyclic, hydroxymethyl, hydroxy-terminated polyoxyalkylene.

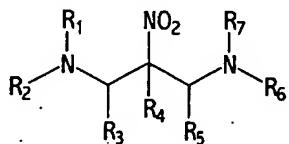
25. The curing agent composition of Claim 5 wherein the nitroaminoalcohol is selected from the group consisting of DEA/NMPD and DMA/NMPD.
6. A curing agent composition comprising a nitroaminoalcohol having the following structures:



wherein n and p are integers from 1 to 6, and R₁ to R₅ are the same or different, selected from H, C₁ - C₁₂ linear or branched alkyl or alkenyl, phenyl, substituted aryl, heterocyclic, hydroxymethyl, hydroxy-terminated polyoxyalkylene.

8. The curing agent composition of Claim 7. Wherein the nitroaminoalcohol comprises PYRR/NMPD.

9. A curing agent composition comprising a nitroamine having the following structure:



wherein R₁ to R₇ are the same or different, selected from H, C₁ - C₁₂ linear or branched alkyl or alkenyl, phenyl, substituted aryl, heterocyclic, hydroxymethyl, hydroxy-terminated polyoxyalkylene.

10. The curing agent composition of Claim 7. Wherein the nitroamine is selected from the group consisting of NMPD-bis-DMA and NMPD-bis-DEA.

11. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises an oxazolidine selected from the group consisting of ZT-55, CS-1135, CS-1991 and CS-1246.

12. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a combination of CS-1135 oxazolidine and DMA/NMPD.

13. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises the nitroalcohol, TN.

14. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises vanillin-IPHA nitrone.

15. The phenolic resin curing agent of Claim 11, wherein the oxazolidine is combined with a nitroaminoalcohol selected from the group consisting of DEA/NMPD, DMA/NMPD and PYRR/NMPD.

16. The phenolic resin curing agent of Claim 13, wherein the nitroalcohol is combined with DEA/NMPD.

17. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a combination of a nitroaminoalcohol and a hydroxylamine.

18. The phenolic resin curing agent of Claim 17, wherein the curing agent comprises a combination of a nitroalcohol, a nitroaminoalcohol and a hydroxylamine.
19. The phenolic resin curing agent of Claim 13, wherein the nitroalcohol is combined with CHDA-A.
- 5 20. The phenolic resin curing agent of Claim 13, wherein the nitroalcohol is combined with a nitroamine.
21. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises NMFD-bis-DEA.
- 10 22. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a hexahydropyrimidine.
23. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a combination of a hydroxylamine and a hexahydropyrimidine.
24. The phenolic resin curing agent of Claim 17, wherein the curing agent comprises a combination of a nitroalcohol, a hexahydropyrimidine and a hydroxylamine.
- 15 25. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a hydroxylamine-formaldehyde nitrone selected from the group consisting of N-CyhexHA, N-BzHA, EHA, PHA, IPHA and tBuHA.
26. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a combination of a nitroalcohol, an oxazolidine, and a hydroxylamine.
- 20 27. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a combination of a nitroaminoalcohol and a hydroxylamine.
28. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a combination of hexamethylenetetramine and a hydroxylamine.
29. The phenolic resin curing agent of Claim 4, wherein the curing agent comprises a combination of hexamethylenetetramine and a nitroamine.